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Portable Multi Hydrophone Array for Field and Laboratory Measurements of Odontocete Acoustic Signals (DURIP)

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LONG-TERM GOALS

The major goal is to build an array to measure the directionality of whistle and clicks produced by odontocetes so that there is verification of signals measured during passive acoustic monitoring.

OBJECTIVES

To measure the outgoing signals of representative odontocetes so that the direction of travel and location of the animals can be better known for passive acoustic monitoring efforts

APPROACH

To build the array from 15 transducers, build and amplifier box to amplify the output from the transducers and construct programs to measure and compare outgoing clicks and whistles of bottlenose dolphins and false killer whales. Measure and compare the signals from animals in fixed positions to determine and compare the directionality of the signals and the change with directionality

WORK COMPLETED

Funding has been secured. Accounts established. Plans formulated. Animals trained for fixed positioning and click and whistle production.

RESULTS

Animals trained for fixed positioning and click and whistle production but it is too soon for results. The array must be built.

IMPACT/APPLICATIONS

These measurement will allow direct comparisons between the types of sounds produced, the way that they change as a function of direction, and the difference between species. Directionality may also effect automatic classification during passive acoustic monitoring.

RELATED PROJECTS

Passive Acoustic Monitoring projects classifying species by acoustics